PF-16

PCMCIA 10/100 Mbps

Ethernet Card

User's Manual

Regulatory compliance

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. This equipment also complies with CE EN55022 Class B and VCCI V3 Class B specifications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the parties responsible for compliance could void the user's authority to operate the equipment.

Table of contents

About this manual

This user's manual describes how to install and operate your PCMCIA 10/100 Mbps Ethernet Card. Please read this manual before you install the product.

This manual includes the following topics:

> ➢ Product description, features and specifications.

> ➢ Hardware installation procedure.

> ➢ Software installation procedure.

> ➢ Trouble shooting procedures

Introduction

Thank you for purchasing the PCMCIA 10/100 Mbps Ethernet Card.

This high-speed Ethernet network adapter card complies with the PCMCIA Type II standard and uses a female RJ-45 adapter to connect to the network.

The Ethernet Card is switchless and software configurable. An enabler program is used to set up the card for your operating system; even without the card and socket service drivers for the PCMCIA controller installed, you will still be able to use the card by running the enabler program.

Features

- Type II credit-card size (5.0 mm)
- Complies with IEEE 802.3u 100Base-TX and 802.3 10Base-T protocols.
- Supports all popular operating systems
- Supports Nway auto-negotiation for 10/100 Mbps full/half-duplex
- Complies with PCMCIA Release 2.1 specifications and later
- Supports hot swap card insertion and removal
- PC Card standard 68-pin 16-bit PCMCIA interface
- 5V power consumption
- FCC/VCCI/CE certified

Hardware installation

This chapter covers inserting your Ethernet Card in the notebook's PCMCIA port, and connecting the card to a network.

What's in the package

Please ensure that the following items are included in your package. If any items are missing, contact your dealer.

- PCMCIA 10/100 Mbps Ethernet Card

- RJ-45 adapter

- Software and device driver disk

- This user's manual

Hardware description

The Ethernet Card is encased in a stainless compact frame and has a 68-pin connector for attaching to the notebook's PCMCIA port, and a 15-pin flat connector for connecting to the Ethernet adapter.

Inserting the Ethernet Card

These instructions apply to most notebook computers. For detailed information on inserting PC cards into your notebook, consult the notebook user's manual.

Follow the procedure below to install the Ethernet Card.

1. With the card's 68-pin connector facing the notebook's PCMCIA slots, slide the card all the way into an empty slot. **Do not force the connection!**
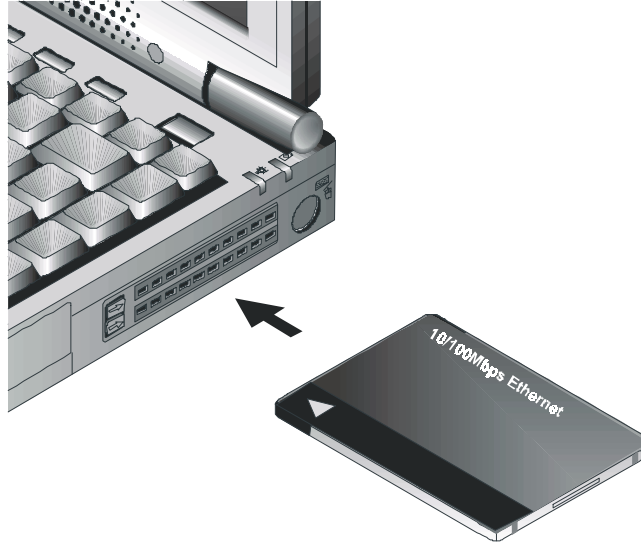
Figure 2-1: Inserting the Ethernet Card

2. Plug the RJ-45 adapter into the Ethernet Card's 15-pin connector.

10/100Mbps Ethernet
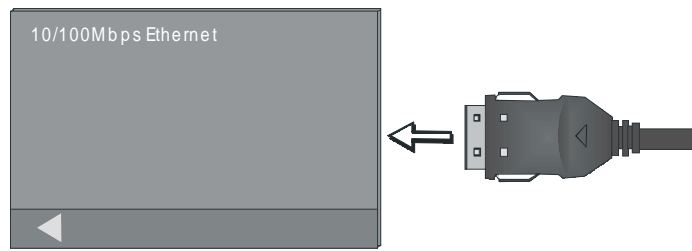
Figure 2-2: Connecting the RJ-45 adapter

3. Connect the RJ-45 adapter to the network.

   You can connect the Ethernet adapter cable to a port on a hub or to a RJ-45 phone jack with another male-to-male RJ-45 line or connector.
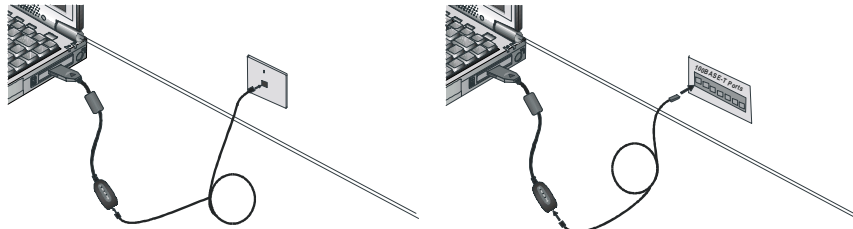
Connecting to a phone jack

Connecting to a hub

Figure 2-3: Connecting to the network

After you have inserted the Ethernet Card, you must install the drivers. If your operating system is Windows 98, Window 95, or Windows NT, refer to Chapter 3. If your operating system is Windows NT 3.51 or another DOS environment network operating system, refer to Chapter 4. If your operating system is Linux, refer to Chapter 5.

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Ethernet Card RJ-45 connector LEDs

The following illustration shows the Ethernet Card RJ-45 connector LEDs:
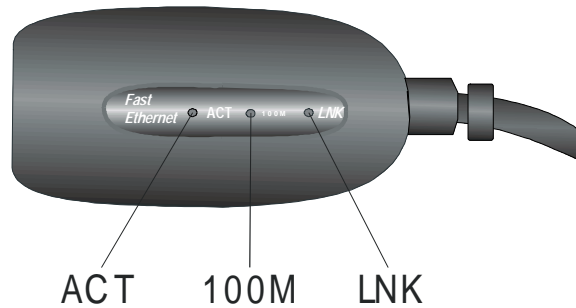
Figure 2-4: RJ-45 connector LEDs

The following table describes the meaning of the LEDs:

LED	MEANING
ACT	Indicates transmit or receive activity. It is normally off. When there is packet transmit or receive activity, this LED is on.
100M	Indicates the connection speed. When off, the connection speed is 10 Mbps. When on, the connection speed is 100 Mbps.
LNK	Indicates whether the link is active or not. When lit, indicates that the link is active. When off, indicates that the link is inactive.

Disconnecting the Ethernet Card

The Ethernet Card RJ-45 connector is designed to lock in place when connected to the Ethernet Card. The following illustration shows the location of the clips:
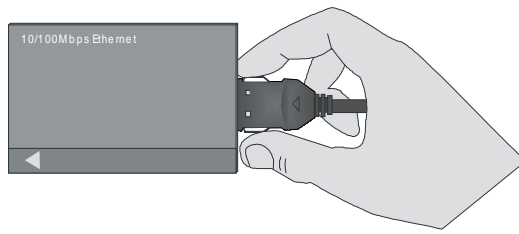
Figure 2-5: Disconnecting the RJ-45 cable

	Do not pull on the RJ-45 cable to disconnect the RJ-45 connector from the card. You may damage the RJ-45 connector pins as well as the Ethernet Card.

After you have disconnected the RJ-45 cable, you can eject the Ethernet Card from the notebook's PC Card slot.

	In Win 95/98 operating systems, you do not have to power down the notebook to remove the card. The card is hot-swappable—you can remove the card when the notebook is powered on. However, Microsoft recommends that you stop the card. Refer to your Win 95/98 online help for information on stopping the Ethernet Card.

Most notebooks have an eject lever or button for ejecting PC cards from the PC ports. Consult your notebook's user's manual for details.

	Do not eject the Ethernet Card when a data transmission is taking place. Exit your communications program normally, stop the card if necessary, and then remove the card.

Driver installation for Win 95/98/NT

The following sections cover PCMCIA 10/100 Mbps Ethernet Card driver installation in the Windows 95, Windows 98, and Windows NT operating systems.

Driver installation for Windows 95

Installation of the Ethernet Card is just the same as for any normal Windows 95 Plug & Play device. Follow the steps below to install the driver in Windows 95.

1. Insert the Ethernet Card into an available PCMCIA slot in your notebook (refer to page 3 "Inserting the Ethernet Card").

2. After Windows 95 detects the card, the *Update Device Driver Wizard* window appears:
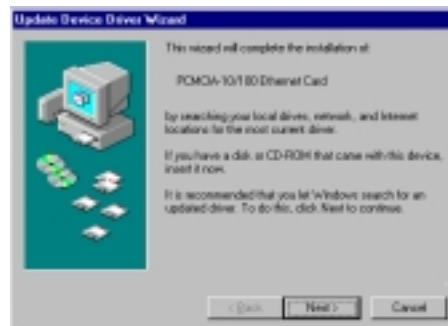
3. Insert the driver disk and click **Next** to continue the installation. Windows searches for the driver and the following screen appears:

4. Click **Finish**. Windows 95 copies driver files to the hard disk.

<table>
<tr><td></td><td>Windows 95 may need to copy required system files and will prompt you to input the path to the files. Follow the instructions on your screen, then click OK to continue.</td></tr>
</table>

5. After all files have been copied, Windows 95 prompts you to restart the system. Click **Yes** to complete the installation.

Driver installation for Windows 98

Follow the steps below to install the Ethernet Card drivers for Windows 98.

1. Insert the Ethernet Card into an available PCMCIA slot on your notebook (refer to page 3 "Inserting the Ethernet Card").

2. After Windows 98 detects the Ethernet Card, the *Add New Hardware Wizard* window appears:
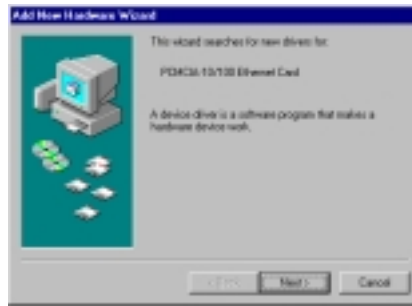
3. Click **Next** to continue the installation. A screen appears prompting you to select an installation method:

4. Select **Search for the best driver for your device** and click **Next**. The following screen appears:
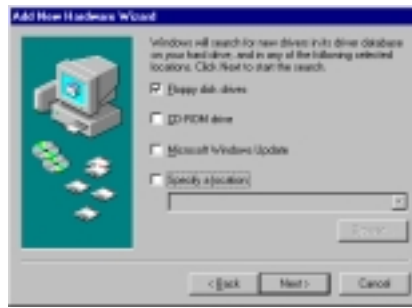
5. Ensure that the **Microsoft Windows Update** box is un-checked, and ensure that the **Floppy disk drives** box is checked.

6. Insert the driver disk into your floppy disk drive and click **Next**. The following screen appears:
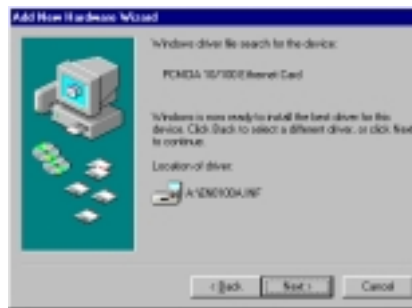
7. Click **Next**. After Windows 98 copies files to your hard disk drive, you are prompted to restart the system.

	*Windows 98 may need to copy required system files and will prompt you to input the path to the files. Follow the instructions on your screen, then click **OK** to continue.*

8. Click **Yes** to complete installation.

Driver installation for Windows NT 4.0

This installation procedure assumes that you have installed the network component on your computer.

To check whether the network component has been installed, double click the **Network** icon in the **Control Panel**. If it has not been installed, refer to the Windows NT 4.0 installation guide for instructions on installing the component.

While installing the network component, Windows NT 4.0 will prompt you to install the network adapter driver. Follow the steps below to install the driver.

1. Insert the Ethernet Card into an available PCMCIA slot on your notebook (refer to page 3 "Inserting the Ethernet Card").

2. Log in to NT 4.0 as "Administrator".

3. Double click the **Network** icon in the **Control Panel**, and select the **Adapters** tab as shown in the following screen:
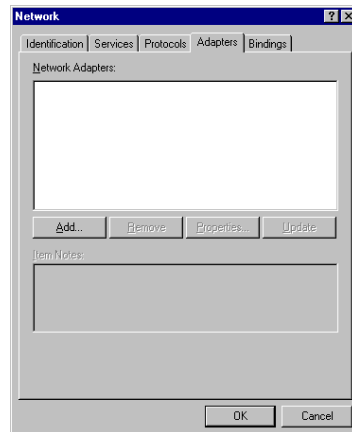
4. Click **Add** to add a new adapter. The following screen appears:
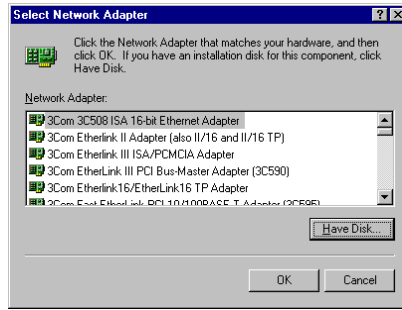
5. Click **Have Disk**. The following screen appears:
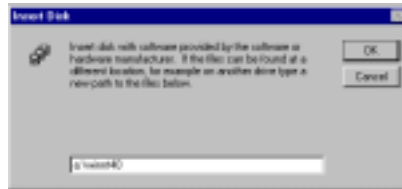
6. Type "A:\WINNT40" where "A" is your floppy drive letter. Insert the driver disk, and click **OK**.

   After finding the installation file, the *Select OEM Option* window is displayed.
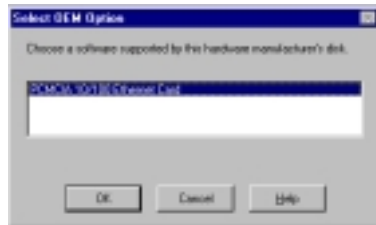
7. Click **OK**. The following screen appears, prompting you to input the IRQ, I/O port address, and connection type:

8. Select the desired IRQ Level, I/O Port Address and Connection Type.

Note!	*You must select an IRQ and I/O port address that is not being used by another device; otherwise, you will have a system conflict error.*
	To see the available IRQ and I/O port addresses, use the Windows NT Diagnostics program in Windows NT Administrator tools. Refer to the Windows NT online help for information on Windows NT diagnostics.

9. Click **OK** to continue. Windows will configure the Ethernet Card. You are returned to the *Network* window.

10. Click **Close** to exit the *Network* window. Windows NT 4.0 will bind the adapter with the network component.

When Windows NT is finished binding the adapter to the network component, you are prompted to restart the system.

11. Click **Yes** to finish the installation.

Driver installation for DOS environments

This section covers PCMCIA 10/100 Mbps Ethernet Card driver installation for DOS environment operating systems.

System Requirements

Hardware Requirements	Notebook equipped with Type II PC Card slot and PC Card controller (compliant Rev. 2.1 or higher
Software Requirements	The Card & Socket service drivers should comply with PCMCIA Release 2.1 or higher

Driver installation

You must install the PCMCIA 10/100 Mbps Ethernet Card drivers before your computer system can recognize your Ethernet Card. The following sections cover client driver installation.

Driver installation program

INSTALL is the PCMCIA 10/100 Mbps Ethernet Card driver installation program. The INSTALL program automatically selects the most suitable option settings, or you can perform a custom configuration where you individually select each setting.

Quick installation

This section gives a brief overview of the installation process. For a more detailed description, refer to page 16, "The Install Program".

1. Card and Socket Services software should be bundled with your computer; if it is not, contact your dealer. It is recommended that you use this software when installing your PCMCIA 10/100 Mbps Ethernet Card.

    A system with Card and Socket Services installed allows the PCMCIA card to automatically configure itself. While the system is on, available system resources and insertion or removal of the card will automatically be detected.

2. Run the INSTALL.EXE program found on your driver disk. The install program guides you through the installation process and will install the network drivers needed to run the card on your network operating system.

    If you successfully completed the installation, go to step 5. If installation was unsuccessful, then go to the next step.

3. If you are using Card and Socket Services, select auto-configuration. The install program will prompt Card and Socket Services to assign an available hardware resource configuration.

4. If you do not have Card and Socket Services or if your card does not work with your version of Card and Socket Services, the enabler program can communicate directly with the PCMCIA controller on your system. However, you must select hardware resource settings that are not being used by other devices; otherwise, your PC system may have device conflicts.

5. Insert the PCMCIA 10/100 Mbps Ethernet Card into the PCMCIA socket (refer to page 3). Then attach the network cable to the card.

6. Restart your computer and connect to your network. If you cannot connect to the network, refer to Appendix B and Appendix C.

The Install program

Before you can use your PCMCIA 10/100 Mbps Ethernet Card, you need to install and modify some files in your computer system. You can make these changes manually, or you can let the INSTALL.EXE program make them for you.

This section explains how you can use the INSTALL.EXE program to install the enablers and the files needed by the network operating system.

Using the Install program

To run the INSTALL.EXE program, follow these instructions:

At the DOS prompt type "INSTALL" and press [Enter]. You see an opening screen, which welcomes you to the program and asks if you wish to continue.
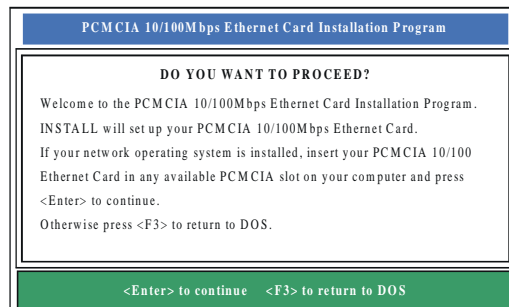
Press [Enter] to continue the installation.

The program prompts you for the directory where you want to install the driver files. You can choose the default directory name or enter a new name. Then, press <Enter> to continue with the installation.

```
PCMCIA 10/100Mbps Ethernet Card Installation Program

                    ENTERING THE INSTALLATION PATH
    INSTALL will create a directory with all of the necessary files to use the
    PCMCIA 10/100Mbps Ethernet Card. Please enter the drive and directory
    name, or confirm the default directory.




    C:\PCMCIA

              <Enter> to continue    <F3> to return to DOS
```
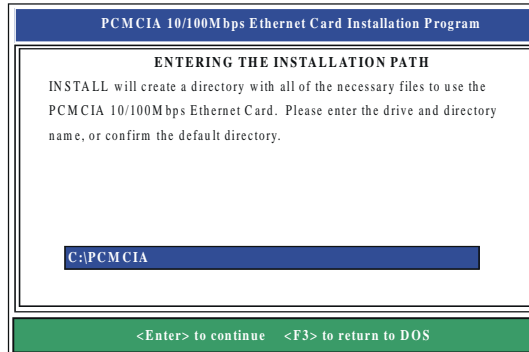
The next screen asks if you want to do an *Auto Configuration* or a *Custom Configuration*.

```
PCMCIA 10/100Mbps Ethernet Card Installation Program

              SELECTING AUTO OR CUSTOM CONFIGURATION
    To configure your PCMCIA 10/100Mbps Ethernet Card, you can select either
    Auto Configuration or Custom Configuration. Using the Auto Configuration
    option, the INSTALL program will automatically configure your PCMCIA
    10/100Mbps Ethernet Card. Select Custom Configuration if the default
    configuration does not work for you or if you want to specify the interrupt (IRQ),
    I/O address, and memory address.

              Auto Configuration
              Custom Configuration

              <Enter> to continue    <F3> to return to DOS
```

Select **Auto Configuration** if you want to do a quick installation and use the default configuration settings. If you wish to individually set any of the settings, then select **Custom Configuration**.

Auto configuration

To use auto configuration, you must have Card and Socket service drivers installed. Refer to your computer user's manual for information.

If you selected *Auto Configuration*, the program auto detects which IRQ, I/O Port, and memory space (MEMBASE) the PCMCIA 10/100 Mbps Ethernet Card can use. After successfully auto-detecting the configuration, the program shows the following screen:

```
┌──────────────────────────────────────────────────────────┐
│        PCMCIA 10/100Mbps Ethernet Card Installation Program │
├──────────────────────────────────────────────────────────┤
│      CONFIGURING THE PCMCIA 10/100Mbps ETHERNET CARD        │
│  The INSTALL program has detected the following configuration options for your │
│  PCMCIA 10/100Mbps Ethernet Card.                          │
│                                                            │
│              ┌──────────────────────────┐                  │
│              │ IRQ       : 5            │                  │
│              │ I/O BASE  : 0x400        │                  │
│              │ MEMBASE  : 0xD400       │                  │
│              └──────────────────────────┘                  │
│                                                            │
├──────────────────────────────────────────────────────────┤
│      <Enter> to continue    <F3> to return to DOS          │
└──────────────────────────────────────────────────────────┘
```
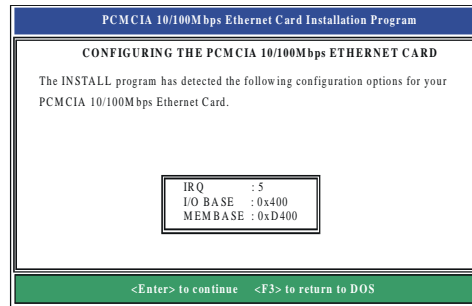
After the configuration process, you are prompted to select the type of network that you are installing. Select a network operating system from the list by moving the cursor to your selection and pressing <Enter>.

```
┌─────────────────────────────────────────────────────────┐
│          PCMCIA 10/100Mbps Ethernet Card Installation Program          │
├─────────────────────────────────────────────────────────┤
│                      SELECTING DRIVERS                      │
│  Select the network drivers that you want to install. Use the up and down arrow  │
│  keys to highlight the desired item.  When a item is highlighted press <Enter>   │
│  to select it.  If the network driver that you want to install is not in the following  │
│  list, press <Esc> to continue.                             │
│                                                             │
│              ┌─────────────────────────────┐              │
│              │  Netware ODI Driver          │              │
│              │  Packet Driver               │              │
│              │  Windows for Workgroups      │              │
│              │  LAN Manager                 │              │
│              │  Artisoft LANtastic          │              │
│              └─────────────────────────────┘              │
├─────────────────────────────────────────────────────────┤
│    <Enter> to continue  <Esc>to continue  <F3> to return to DOS    │
└─────────────────────────────────────────────────────────┘
```

After selecting the network operating system, the INSTALL program will copy and modify files on your boot drive. Your CONFIG.SYS file will also be modified to include the Enabler Driver. You should see the following message if the installation has been successful:

```
┌─────────────────────────────────────────────────────────┐
│          PCMCIA 10/100Mbps Ethernet Card Installation Program          │
├─────────────────────────────────────────────────────────┤
│                  INSTALLATION  SUCCESSFUL                   │
│                                                             │
│  INSTALL has created/modified your AUTOEXEC.BAT and CONFIG.SYS file  │
│  to enable the PCMCIA 10/100Mbps Ethernet Card.  The original files have been  │
│  renamed to AUTOEXEC.PCM and CONFIG.PCM.  If you have any problems  │
│  with the new CONFIG.SYS file when you reboot your computer, you should  │
│  restore the original files.                                │
│  Remove the Driver Disk and reboot your computer now.       │
│                                                             │
├─────────────────────────────────────────────────────────┤
│              Press any key to return to DOS                 │
└─────────────────────────────────────────────────────────┘
```

Custom configuration

To perform a custom installation, you need to select the Custom Configuration Menu after you begin the INSTALL program.

After selecting the Custom Installation Menu, you see a series of submenus prompting you to select an IRQ and I/O address.

Interrupt select

The first submenu is the Interrupt submenu. Move the cursor to the interrupt of your choice and select it by pressing <Enter>. Interrupts available for your PCMCIA 10/100 Mbps Ethernet card include 3, 4, 5, 9, 10, and 11.

```
┌──────────────────────────────────────────────────────┐
│     PCMCIA  10/100Mbps Ethernet Card Installation Program │
├──────────────────────────────────────────────────────┤
│                  SELECTING  INTERRUPTS                 │
│   Please select the hardware interrupt that you would like your PCMCIA │
│   10/100Mbps Ethernet Card to use.  Use the up and down arrow keys to │
│   highlight the desired value.  When the desired value is highlighted, press │
│   <Enter> to select it.                                │
│                                                        │
│                        ┌──────────┐                    │
│                        │    3     │                    │
│                        │    4     │                    │
│                        │    5     │                    │
│                        │    9     │                    │
│                        │    10    │                    │
│                        │    11    │                    │
│                        └──────────┘                    │
├──────────────────────────────────────────────────────┤
│      <Enter> to continue    <F3> to return to DOS      │
└──────────────────────────────────────────────────────┘
```
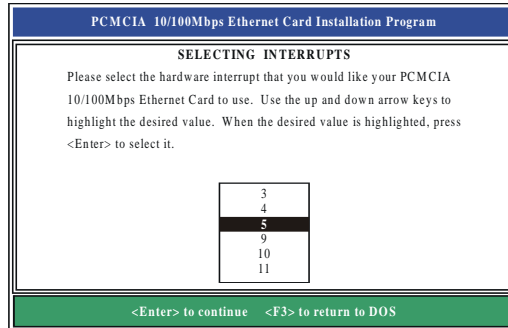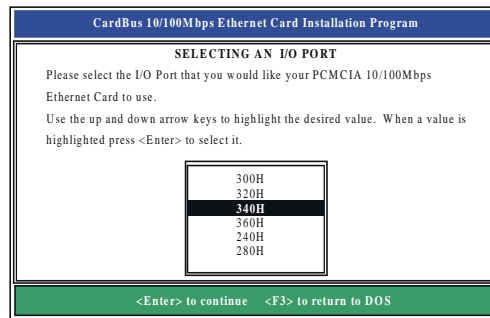
IO port select

Move the cursor to the desired I/O address and press <Enter>. Available I/O Ports are 300H, 320H, 340H, 360H, 240H and 280H.

```
┌──────────────────────────────────────────────────────┐
│     CardBus 10/100Mbps Ethernet Card Installation Program │
├──────────────────────────────────────────────────────┤
│                  SELECTING AN  I/O PORT                │
│   Please select the I/O Port that you would like your PCMCIA 10/100Mbps │
│   Ethernet Card to use.                                │
│   Use the up and down arrow keys to highlight the desired value.  When a value is │
│   highlighted press <Enter> to select it.              │
│                                                        │
│                        ┌──────────┐                    │
│                        │   300H   │                    │
│                        │   320H   │                    │
│                        │   340H   │                    │
│                        │   360H   │                    │
│                        │   240H   │                    │
│                        │   280H   │                    │
│                        └──────────┘                    │
├──────────────────────────────────────────────────────┤
│      <Enter> to continue    <F3> to return to DOS      │
└──────────────────────────────────────────────────────┘
```

Memory space select

Move the cursor to the desired memory space address and press <Enter>. Available memory space addresses are D000H, D400H, D800H, and DC00H.

```
┌─────────────────────────────────────────────────────────┐
│        CardBus 10/100Mbps Ethernet Card Installation Program │
├─────────────────────────────────────────────────────────┤
│                  SELECTING A MEMORY ADDRESS               │
│  Please select the memory address that you would like your PCMCIA 10/100Mbps │
│  Ethernet Card to use.                                    │
│  Use the up and down arrow keys to highlight the desired value.  When a value is │
│  highlighted press <Enter> to select it.                  │
│                                                           │
│                         ┌──────────┐                      │
│                         │  D000H   │                      │
│                         │  D400H   │                      │
│                         │  D800H   │                      │
│                         │  DC00H   │                      │
│                         └──────────┘                      │
│                                                           │
├─────────────────────────────────────────────────────────┤
│      <Enter> to continue    <F3> to return to DOS         │
└─────────────────────────────────────────────────────────┘
```
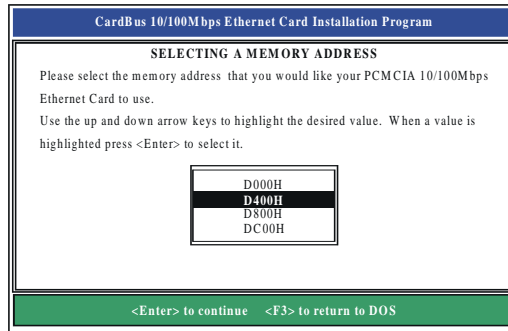
Manual installation

In most cases, the INSTALL program can make all system changes necessary for using your PCMCIA 10/100 Mbps Ethernet Card. However, in some cases, you may wish to make changes manually. This section explains how to manually make driver and file modifications to enable your card.

Enablers

You can use CARDGO.EXE to enable the PCMCIA 10/100 Mbps Ethernet Card.

The CARDGO program

The program CARDGO.EXE communicates with the PC Card controller of your computer. This program is needed only for DOS environment network operating systems. You may install the Socket and Card Services to your notebook before executing

the driver. If you do not have the Socket and Card Services program, please contact your notebook vendor.

The Install program will automatically add a line to your CONFIG.SYS file using the following syntax and format:

DEVICE=[path_name]CARDGO.EXE [/IRQ=xx] [/IO=xxx][/MEM=xxxx][/?]

where

[/IRQ=xx]	Specifies the hardware interrupt of your card. Default value is *5*.
	Valid IRQs are 3, 4, 5, ,9, 10, and 11.
[/IO=xxx]	Specifies the I/O address. Default value is *300*.
	Valid port addresses are 300, 320, 340, 360, 240, and 280.
[/MEM=xxxx]	Specifies the memory address. Default value is *D400H*.
	Valid memory addresses are D000H, D400H, D800H, and DC00H.
[/?]	Displays all possible command syntax.

You can also run CARDGO.EXE by typing "CARDGO" at the DOS prompt or by including it as a line in your AUTOEXEC.BAT file.

After you executed CARDGO.EXE, you will see a display similar to the following indicating that the installation was successful:

Socket	:	0
IRQ Number	:	05
I/O PORT Base	:	300H
MEM Base	**:**	D000H

The list of error messages the client driver may display and the correction methods suggested are given in *Appendix B*.

Driver installation

The following sections cover installation of the client driver for Windows NT 3.51, Windows for Workgroups 3.11, Netware 3X/4X, Microsoft LAN Manager, and Artisoft LANtastic Version 6.0.

Microsoft Windows NT 3.51

Follow these instructions to install the Microsoft Windows NT 3.51 client for your Ethernet Card:

1. Insert the Ethernet Card into an available PCMCIA slot.

2. Boot the computer.

3. Click **Control Panel** in the main window and click the **Network** icon.

4. Click **Add Adapter**. Pull down the adapter's list and select **<other> Requires disk from manufacturer,** then click **Continue**.

5. Type "A:\winnt351" (where "A" is your floppy drive) and click **OK**.

6. Set the proper IRQ, I/O port, memory address settings, and connection type for this card.

7. Reboot the computer to complete the installation.

Microsoft Windows for Workgroups 3.11

Follow these instructions to install the Windows for Workgroups 3.11 client for your Ethernet Card:

1. Run INSTALL.EXE, and choose Windows for Workgroups.

2. Run Windows by typing "WIN" at the DOS prompt.

3. Click the **Network** icon in the Main Program Group.

4. Click the **Network Setup** icon from the Network window.

5. Select the **Drivers** item from the Network Setup dialog box.

6. Select the **Add Adapters** item in the Option dialog box.

7. Select **Unlisted or Updated Network Adapter** when the Install driver field appears.

8. Type the path "A:\WFW311" and press <Enter>.

9. When the **PCMCIA 10/100 Mbps Ethernet Card** dialog box appears, select the options step by step.

10. Follow the instructions on the screen.

11. Reboot your computer.

Netware 3.X/4.X client

Follow these instructions to install the Netware 3.X/4.X client for your Ethernet Card:

1. Run the INSTALL program, and select the **Netware ODI Driver**.

2. Follow the instructions on the screen to complete the installation.

3. Reboot the computer.

4. When the computer reboots, log on to the network.

Microsoft LAN Manager

Follow these instructions to install the Microsoft LAN Manager client for your Ethernet Card:

1. Run the INSTALL program, and choose **LAN Manager**.

2. Type "lmsetup" in the LAN Manager Directory. Press <Enter>.

3. Select **Network Drivers** in "Configuration". Press <Enter>.

4. Select **Add New Configs** and then press <Enter>.

5. Select **Other Driver** and press <Enter>.

6. Insert the driver disk into the FDD and click **OK**.

7. Select the Network Adapter Driver, **PCMCIA 10/100 Mbps Ethernet Card**, then click **OK**.

8. Press <Spacebar> to select the desired protocol.

9. Click **OK**. The message "Configuration Complete" appears.

10. Click **Save**, then press <F3> to exit.

Artisoft LANtastic version 6.0

Follow these instructions to install the Artisoft LANtastic Version 6.0 client for your Ethernet Card:

1. Run the INSTALL program, and choose **LANtastic**.

2. Select **Artisoft LANtastic**, and specify C:\LANTASTI as the destination directory.

3. When the **Select network adapter** screen appears, choose **NDIS Support for Network Adapters**.

4. When the install program prompts you for the manufacturer's driver disk in the **Enter NDIS driver directory** screen, insert the driver disk.

5. Follow the instructions on the screen to complete the installation, then reboot the computer to start LANtastic.

Installation for Linux

This section covers the PCMCIA 10/100 Mbps Ethernet Card driver installation for the Linux environment operating system.

Before you install the PCMCIA 10/100 Ethernet card Linux driver, you must first configure the PCMCIA interface in your Linux working environment.

System Requirements

- Linux kernel version 2.0.x or later

- PCMCIA interface 3.0.x or later

You can get the latest version of the PCMCIA interface package from the one of the following URLs:

- ftp://hyper.stanford.edu/pub/Linux/kernel/pcmcia

- ftp://sunsite.unc.edu/pub/Linux/kernel/pcmcia

After downloading the PCMCIA interface package, refer to the PCMCIA-HOWTO file for installation instructions.

Installing the driver for Linux

Follow these instructions to install the driver for the Linux operating system:

1. Log on as the "root".

2. Copy the driver code from the Installation disk using the following syntax:
    ```
    mount /dev/fd0 /mnt
    cp /mnt/linux/en0100a.tar /tmp
    cd /tmp
    tar xvf en0100a.tar
    ```

3. Generate the driver using the following syntax:
    ```
    cd /tmp/en0100a
    make all
    ```

If the path of your PCMCIA source is not "/usr/src/linux/pcmcia-3.0.9", you need to modify the "PCMCIASRC" variable of the "Makefile" file. Consult your Linux documentation for details.

If the path of your loadable module is not "/lib/modules/2.0.35", you need to modify the "DEST1" & "DEST2" variables of the "Makefile" file. Consult your Linux documentation for details.

4. Install the driver using the following syntax:
    ```
    make install
    ```

5. Configure the PCMCIA 10/100 Ethernet card using the following syntax:
    ```
    cd /etc/pcmcia
    ```
    Add the following text to the "config" file. The config file must be in "write" mode.

```
card "PCMCIA 10/100 Ethernet Card"
version "PCMCIA", "10/100 Ethernet Card"
bind "pcnet_cs"
```

6. Configure the PCMCIA NIC interface using the following syntax:

```
vi network.opts
```

7. Reboot Linux using the following syntax:

```
sync;sync;reboot
```

Troubleshooting

Q&A for Windows environments

These guidelines give you tips to deal with some problems on using Ethernet Card. If the problems remain unsolved, contact your dealer for assistance.

Windows 95/98

Problem: Ejecting the card from the PCMCIA socket hangs or reboots the computer.

Solution: To prevent this phenomenon from occurring, stop the card by using the PC Card tool in the Control Panel or the PC Card icon on the taskbar before you remove the card.

Problem: The card cannot be detected when reinserted.

Cause: This is caused by certain unstable PCMCIA status lines when the card is removed and reinserted. The Windows 95/98 drivers may read an incorrect status during this period of signal instability, and fail to detect the correct status of the card.

Solution: The card can be detected by clicking "Refresh" in Device Manager.

Windows NT 4.0 and 3.51

Question: Does the driver support "hot-swap" on NT 4.0 and 3.51?

Answer: Windows NT 4.0 and 3.51 don't support hot swapping. If you want to remove the card, shut down the computer and remove it.

Enabler program error messages

CARDGO.EXE

Here is the list of error messages the CARDGO.EXE may display.

Error	Message	Solution
[Error 1]	"The PCMCIA controller is not present or recognized"	There is no PCMCIA controller on your computer. Install a PCMCIA controller from another computer.
[Error 2]	"There is no card in the PCMCIA slot. Insert the card."	Ensure that the PC card is correctly inserted into the PCMCIA slot.
[Error 3]	"The card in PCMCIA slot is not PCMCIA 10/100 Mbps Ethernet Card. Insert it"	Ensure that the PC Card in the notebook's PCMCIA slot is the Ethernet Card and that it is correctly inserted.
[Error 4]	"The I/O ports do not respond. Change to another one"	Change to another I/O port using /IO=xxx. Refer to "Manual Installation" in Chapter 4.
[Error 5]	"The I/O ports specified are invalid. Change to another one"	Valid I/O addresses are 240, 280, 300, 320, 340, and 360.
[Error 6]	"The IRQ specified is invalid. Change to another one"	Valid IRQ values are 3, 4, 5, 9, 10, and 11.

Error	Message	Solution
[Error 7]	"The memory address specified is invalid. Change to another one"	Valid memory addresses are D000, D400, D800, and DC00.
[Error 8]	"Enabler has been registered"	The client driver has already been registered. You don't need to install the client driver again.
[Error 9]	• "Enabler can't be registered as a client" • "Can't map memory" • "Configuration can't be requested"	These three errors are concerned with Socket and Card services of the PCMCIA controller. Try using another third party Socket and Card service that supports this PCMCIA controller.

錯誤! 尚未定義樣式。

Specifications

Standards Compliance:	IEEE 802.3 10Base-T, 802.3u 100Base-TX
Card Size:	5.0mm Type II
Connection Mode:	Full or Half duplex for both 10 and 100 Mbps
Media Supported:	Category-3,4,5 for 10Base-T Category 5 for 100Base-TX
Operating Distance:	100m maximum hub-to-node distance
Network Interface:	Female RJ-45 connector
Socket Interface:	68-pin 16-bit PCMCIA socket connector
Operating Temperature:	10ºC to 50ºC
Certification:	FCC/VCCI/CE Class B
Dimensions:	85.6 x 54 x 5 mm
Power Consumption:	5V power supply and 3.3V operation 750mW/10 Mbps mode, 1150mW/100 Mbps mode